

**Annual Report
1988-1989**



OWMC

**Ontario Waste
Management Corporation
Société Ontarienne
De Gestion Des Déchets**

July 1989

The Honourable Jim Bradley
Minister of the Environment

Dear Mr. Bradley:

I have the honour of submitting the eighth annual report of the Ontario Waste Management Corporation for the fiscal year ended March 31, 1989.

Respectfully submitted,

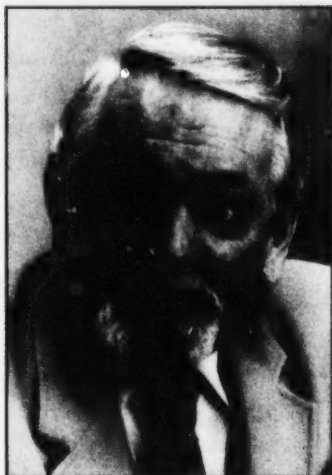
A handwritten signature in dark ink, appearing to read "D. A. Chant", with a long horizontal flourish extending to the right.

D. A. Chant
Chairman and President

Highlights of the Year

■■■ OWMC submitted its final six-volume environmental assessment on its proposed waste treatment facility to the Ontario Ministry of the Environment; ■■■ attended two meetings held by the Joint Board appointed to conduct hearings on OWMC's environmental assessment to discuss rules and procedures; ■■■ established a working group with representatives of the 12 municipalities in Niagara Region to review on- and off-site emergency response issues related to the proposed facility; ■■■ began crop monitoring at locations up to five kilometres from the centre of the proposed site in the Township of West Lincoln, Region of Niagara; ■■■ held workshops on waste auditing and reduction for industry in cities across Ontario; ■■■ co-sponsored the first national symposium on recycling in Hull, Quebec; ■■■ expanded the speakers program in response to growing interest and concern about the effects of toxic wastes on the environment.

Meeting the Challenge of Hazardous Wastes



Dr. Donald A. Chant, Chairman and President

1988 was a watershed year for OWMC. With the submission of our final environmental assessment, we are much closer to achieving our primary goal of building the world's best hazardous waste treatment and disposal facility. ■■■ The facility we are proposing to build will greatly improve Ontario's system for managing hazardous wastes. It will provide both the capacity and treatment capability that are lacking in the current system and will make it possible for the Ministry of the Environment to fully enforce new pollution control measures, such as the Municipal-Industrial Strategy for Abatement (MISA). ■■■ This is even more important now than it was eight years ago when we started our work. Increasingly, the public is demanding an end to the release of toxic contaminants into the environment from all sources. At the same time, there is a growing realization that there are no simple answers to our waste problems. Rather, we have to deal with them on a number of fronts. ■■■ OWMC does not claim to have a single answer to Ontario's hazardous waste management problems. An effective waste management strategy must also involve private industry, local governments and consumers. In addition to

our facility, regulatory initiatives such as MISA are required, as well as greater efforts to reduce and recycle wastes, enhanced on-site waste treatment by industry, and better management of household hazardous wastes. None of these approaches by themselves will solve the problem, but together they will do much to protect human health and the environment in this province. ■■■ Whether OWMC will be able to play an important role in that effort will depend on the outcome of the public hearing. I am confident that our environmental assessment – the most detailed and comprehensive ever done on a project in Ontario – will pass this test with flying colours.

A handwritten signature in dark ink, reading "D. A. Chant". The signature is stylized with a long, sweeping horizontal line extending from the end of the name.

D. A. Chant
Chairman and President

Board of Directors

OWMC's eight-member Board of Directors is appointed by Orders-in-Council for three-year terms.

Dr. Donald A. Chant

Chairman and President

Zoologist. Formerly Vice-President and Provost of the University of Toronto and Chairman of the Canadian Environmental Advisory Council

James M. King

Vice-Chairman

Formerly Chairman of the Board, Alfa-Laval Limited, Peterborough

G. Firman Bentley

President, Basic Petrochemicals Group, Polysar Limited, Sarnia

Maryon Brechin

Past-President, Consumers' Association of Canada, Burlington

Edith L. Fuller

Mayor, Town of Haldimand, Regional Municipality of Haldimand-Norfolk, Cayuga

Arthur M. Renn

Formerly President of the Norfolk Federation of Agriculture and Director of the Ontario Federation of Agriculture, Windham Centre

R. Stephen Rodd

Professor, School of Agricultural Economics and Extension of Education, University of Guelph

Tom Taylor

President, Preston Manufacturing Limited, Cambridge

Remuneration of Directors

The Directors of the Corporation, except the Chairman who is a salaried employee, are paid \$200 a day for attending board and committee meetings. ■■■ The total remuneration for all Directors for the year ended March 31, 1989 was \$9,700 compared to \$12,700 for the previous year.

The Facility

Ontario lags behind other parts of the industrialized world in the way we manage our hazardous wastes. In western European countries such as West Germany, Austria, France, Finland Sweden, and Denmark, businesses routinely send their hazardous wastes to central facilities for safe treatment and disposal. ■■■ OWMC is proposing to build a hazardous waste treatment and disposal facility in the Township of West Lincoln, in the Regional Municipality of Niagara. ■■■ This facility is described in our environmental assessment and, in more detail, in our design and operations report. Built all on one site, it will be equipped to treat and dispose of every kind of hazardous waste generated in the province, except radioactive wastes which are the responsibility of the federal government. ■■■



After analysing the facility design in detail, a team of experts concluded that it meets the most stringent safety criteria. From left to right: team members Bob Johnson and Fred Leverenz of Battelle Technology International (Columbus Division), Dr. Chih Chao, OWMC's process design coordinator and Y. S. Chong of Monenco Consultants Limited



Scientists at the Wastewater Technology Centre are carrying out tests for OWMC to refine techniques for solidifying waste residues. Chemist Rob Caldwell measures the strength of a solidified waste.

Initially, the facility will be able to process up to 150,000 tonnes of wastes a year. Its annual capacity can be increased if necessary to 300,000 tonnes. ■■■

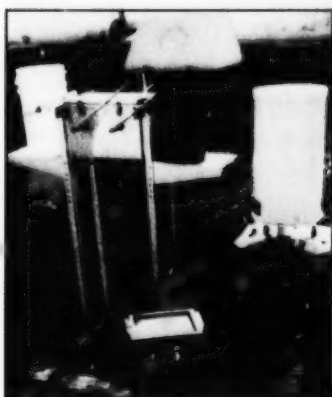
In designing the facility we looked to West Germany for the advanced technologies that we will use in our own facility. Our rotary kiln incinerator, for example, is modelled on one that has been used successfully for nearly a decade at a plant in Biebesheim near Frankfurt. ■■■ Director of operations Dick Griffiths and communications officer Mary Lou Garr of our Smithville office visited the facility in Biebesheim and one in Nyborg, Denmark in September 1988. Mary Lou talked to many of the nearby farmers and found that generally they have few concerns about living and farming near such facilities.

Testing

Over the past two years, Zenon Environmental Inc. has been carrying out waste treatability tests for OWMC. These tests will help determine the best physical and chemical treatment methods for the different types of waste expected at our facility. Testing was carried out in 1988 to develop methods for recovering materials such as salts and to improve techniques for treating the most difficult wastes, such as those containing mercury. ■■■ OWMC is also refining its techniques for solidifying residues. Tests carried out for us last year at the Wastewater Technology Centre in Burlington succeeded in immobilizing chlorides. This is a significant improvement in solidification technology. Scientists at the centre are now doing tests to verify these results under simulated landfill conditions.

Site Assessment

OWMC has selected a 124-hectare site for its facility at Highway 20 and Schram Road in the Township of West Lincoln, Region of Niagara. Of the more than 150 locations considered, the West Lincoln site best meets our criteria for minimizing risk and impact. In particular, it has an underlying layer of uniform thick clay soil which will greatly impede movement



Instruments on the roof of OWMC's air monitoring station measure precipitation, air quality and atmospheric conditions at the site.

off the site of any contaminants that may be present in leachate from the landfill. ■■■ A complete description of the site selection and assessment processes is given in volumes 3 and 5 of our environmental assessment.

Effects

OWMC is required by the Environmental Assessment Act to assess the effects of the facility on the natural environment and community life. Our findings and recommendations are set out in our EA

and Phase 4B (site assessment) reports which are available in public libraries throughout the province. ■■■ The effects of the facility, which are mainly visual, noise and dust, will be limited to people living within five kilometres of the site. There may also be a temporary drop in property values in this area. As part of our EA, we are recommending measures to protect property values, mitigate undesirable effects and compensate people who will be adversely affected. ■■■ Funding has been made available since 1985 to enable groups and individuals to review our site selection and assessment reports. Since then, more than \$2,190,000 has been awarded. Funding in the amount of \$658,000 was provided last year to the Township of West Lincoln and the Region of Niagara to cover administrative and other costs associated with our project. ■■■ OWMC's funding program ended in January 1989 with the announcement by provincial Cabinet that \$3.2 million in funding would be provided to registered intervenors at the public hearing.

Monitoring

OWMC has been gathering and analysing information about air, groundwater and surface water conditions at the site for almost four years. These data have been useful in designing the facility and predicting its effects, and they will also be valuable as a basis for comparison once the facility starts up. ■■■ Local farmers are particularly interested in our



Dr. James Barker of the Institute for Groundwater Research at the University of Waterloo holds a sample of clay soil taken from the site. The soil was analysed for microbiological activity and reaction to leachate.

crop monitoring program. For two summers, we have been growing and analysing certain plants known to be sensitive to contaminants, such as alfalfa, rye, tobacco, and gladioli. Test plots were cultivated on the site during the first summer. Last year, we added plots at locations up to five kilometres from the centre of the site. ■■■ Our consultants continued to do soil tests at the site to check groundwater movement, the depth of soil fractures, and microbiological activity. The results of their tests are being used in the design of the landfill. ■■■ OWMC intends to carry out an extensive environmental monitoring program through the life of the facility and for some time afterwards. In our environmental assessment, we are recommending that a monitoring committee be formed which would include representatives of the local community.

Market Assessment

OWMC's proposal for a treatment and disposal facility is based on an analysis of the hazardous wastes market in Ontario. Much of our information has come from Ministry of the Environment records. Hazardous and liquid industrial wastes must be registered with the ministry under Regulation 309 of the Environmental Protection Act. Copies of the manifest (shipping) documents with information about their destinations must also be filed with the ministry if the wastes are sent off-site. Additional information has been gathered from surveys of companies and other studies. ■■■

The following briefly summarizes the data and our conclusions. A detailed explanation is given in volume one of our environmental assessment. ■■■

We found that in 1986 approximately 11,000 generators registered a total of about 3.6 million tonnes of hazardous and liquid industrial wastes. Of this, roughly 0.9 million tonnes were sent off-site to landfills, water pollution control plants, incinerators and other destinations. Some of it was put untreated into municipal landfills, stored or sent out-of-province because of a lack of treatment facilities in Ontario. ■■■

About 210,000 tonnes, according to OWMC studies published in 1988, came from households, commercial enterprises, and spill and site clean-ups. ■■■ Households alone accounted for about 87,000 tonnes of hazardous waste. Much of this is going into sewers



The OWMC Laboratory is adding to our knowledge of hazardous wastes. Laboratory supervisor Joan Etheridge (left), discusses analytical results with waste management specialist Dr. Janet Laird.

and municipal landfills. As part of its business planning, OWMC is considering how it can help communities manage small volumes of hazardous wastes more effectively. ■■■ The amount of hazardous wastes from all sources will increase over the next decade as the economy grows and stricter pollution controls are brought in. OWMC has concluded that its proposed facility is needed to manage safely all the wastes that will require off-site treatment and disposal in this province.

Analytical Services



Chemist Pat Leishman with some of the many samples of industrial wastes analysed at the OWMC Laboratory.

Chemists at the OWMC Laboratory in Burlington have analysed hundreds of waste samples from clients in industry. Often they are asked to analyse wastes to find out if they are hazardous and should be registered, or if levels of contaminants meet sewer use bylaws. When analysis indicates a waste problem, the company is referred to an OWMC waste management specialist for help. ■■■ As well as providing a valuable service to industry, the OWMC Laboratory is adding to our knowledge of the characteristics and properties of hazardous waste and developing analytical methods that will be used to test wastes at the facility. ■■■

Laboratory supervisor Joan Etheridge has contributed her expertise on several standard-setting bodies here and in the United States. For example, she is a member of a Canadian Standards Association committee which is drawing up a code of practices for Ontario laboratories that analyse hazardous wastes. ■■■ Analytical work is also being done by Zenon Environmental Inc. under contract to OWMC. Zenon is developing protocols that will be used to test wastes before and after they arrive at the facility and for the purposes of process control and environmental monitoring. Last year, the company began working on a manual of standard operating procedures for the facility laboratory.

Waste Reduction

OWMC has helped many Ontario companies with their waste problems. Our waste management specialists offer confidential advice, by telephone and in person, on technologies and methods that have proven effective in reducing wastes. They also provide companies with abstracts of the latest published information on waste reduction from Canadian and U.S. databases. ■

Articles about companies that have successfully reduced their wastes are featured in each issue of our Waste Reduction Bulletin. Last year, three issues of the newsletter were sent to about 12,000 people in industry and government. Judging by the results of a readership survey, the Bulletin is helping meet a need in industry for more information about waste reduction. ■ OWMC's manual and workshops on waste auditing and reduction have also been well-received



Waste management specialist Jody Sabo shows OWMC's Industrial Waste Audit and Reduction to consultant Dr. Bak Chauhan at a workshop in Hamilton.



OWMC's waste management specialists advise companies as to how they can reduce their wastes. At Torcad Limited, a plating company in Toronto, Les Kuczynski (left), and John Richmond (centre), talk to Paul Raymond, quality control manager.

by industry. Since October 1987, we have sold more than 800 copies of our Industrial Waste Audit and Reduction Manual and a second edition is planned for 1989. Our workshops on waste auditing and reduction, which have been held in a different city every month, have attracted people from a wide spectrum of industry as well as from government. Staff also gave talks on the subject to companies and industrial associations and at conferences. ■ Last year we began production on two videos on waste auditing and reduction. These became available in the spring of 1989. ■ OWMC also sponsors a number of projects to encourage waste reduction. For the last five years, we have given funding to the Ontario Waste

Exchange, a non-profit organization which helps companies find markets for their wastes. We also fund research projects to develop simple and inexpensive processes that can be used by industry to reduce or upgrade wastes for reuse. Last year, for example, a process was developed to convert zirconium waste to zirconia which can be used as an abrasive. ■ In March 1989, the corporation and other members of the Canadian Alliance for Recycling and the Environment sponsored the first national symposium on recycling in Hull, Quebec. Recommendations from the symposium have been sent to the federal and provincial ministers of environment for review.

Hearings Preparation



Hearings supervisor Mario Johnson and Chris Taylor, an environmental planner, prepare information for the public hearing on OWMC's proposal.

OWMC's six-volume environmental assessment was submitted to the Ministry of the Environment last November. During the reporting period, it was being reviewed by all the government ministries and agencies with an interest in the proposed facility. Since submitting our EA, we have been preparing for the public hearing which is expected to start in late 1989. ■

Much of the groundwork for the hearing involves assembling 60 witness statements (evidence from our experts) on every aspect of our proposed facility. These will be given to the intervenors (groups taking part in the hearing) well in advance of the hearing. ■ In January 1989, the Ontario Cabinet announced that the intervenors will receive \$3.2 million to help them pay fees for consultants and lawyers so that they will be able to participate in the hearing. ■ Members of the Joint Board which will be conducting the hearing were appointed by the chairmen of the Environmental Assessment Board and the Ontario Municipal Board. They are Dr. Jim Kingham, a vice-chairman of the Environmental Assessment Board, Barbara Doherty, a member of the Environmental Assessment Board, and Gordon Thompson, QC, a member of the Ontario Municipal Board. ■

OWMC staff met twice with the board and intervenors to discuss the location and rules of procedure for the hearing. The board will announce its decisions on these matters in the spring of 1989.

Communications

OWMC has always placed a high priority on communications and public consultation. Staff at our Smithville office play an especially important part in communicating our activities to the people of Niagara Region. Last year, as well as answering hundreds of questions about our facility, they spent a great deal of time in the community talking to students, farmers, politicians, associations and various groups. ■

One way of meeting people was the 'library days' program started last spring. Open houses in Smithville and Vineland also gave staff an opportunity to talk to local residents about our work. ■ The two events that sparked the greatest interest in the region, however, were the distribution of our environmental assessment summary early in the new year and a visit by communications officer Mary Lou Garr to West German and Danish toxic waste facilities. ■ These and other activities were reported in our tabloid Update which was sent bimonthly to more than 70,000 households in the region. Last year, we launched a new publication called Courier which examines some of the complex issues relating to hazardous wastes. Editions of Courier published in 1988-89 discuss our approach to hazardous waste management and our choice of landfill technology. ■ OWMC's speakers program was expanded in the past year and has proven to be an excellent way of raising



Mary Lou Garr shows OWMC publications to Mary Podolyak, librarian at the Wainfleet public library.

public awareness of toxic wastes. Staff have spoken to diverse audiences, among them students, professional and industrial associations, and service clubs. Requests for speakers continue to come in at the rate of about eight a month. ■ Many of our information requests come from teachers and students. To meet this demand we are preparing an educational kit and teachers' guide which can be used to teach about toxic wastes in new science courses. Kits will be distributed to selected teachers in the summer of 1989 for trial use in the coming school year. ■ Our video/film "Industrial Waste: A Challenge We Must Meet" is a good introduction to the subject of hazardous wastes. During the year, we started production on two other videos, both on waste auditing and reduction, which will be available in the spring of 1989.

**Statement of
Financial Position**
as at March 31, 1989

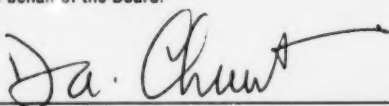
	1989	1988
	(\$'000)	(\$'000)
Assets		
<i>Current</i>		
Cash		
General	3	139
Intervenor (note 2)	800	-
	803	139
Sundry receivables	34	26
Prepaid expenses	49	47
	886	212
<i>Fixed (note 3)</i>	336	274
	1,222	486

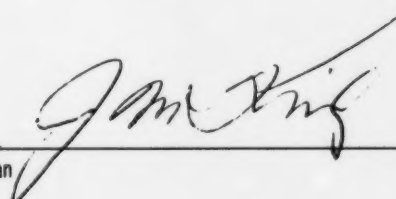
Liabilities and Deficit

<i>Current</i>		
Accounts payable and accrued liabilities	2,083	2,204
Deferred intervenor grants (note 2)	767	-
	2,850	2,204
<i>Deficit</i>	(1,628)	(1,718)
	1,222	486

See accompanying notes to financial statements.

On behalf of the Board:


Chairman


Vice Chairman

**Statement of
Operations and Deficit**
for the year ended
March 31, 1989

	1989	1988
	(\$'000)	(\$'000)
Revenue		
Grants from Province of Ontario		
General	13,500	13,600
Intervenor (note 2)	33	-
Interest	43	42
	13,576	13,642
Expenditure		
Salaries and benefits	3,130	3,026
Facilities development	2,514	3,335
Site assessment	2,281	3,911
Hearings preparation	1,973	1,582
Office and general	780	709
Waste reduction and market assessment	889	1,048
Public funding	867	823
Occupancy	563	600
Management consultants	407	341
Publications	291	143
Depreciation	91	75
Technical communication services	54	119
Intervenor funding (note 2)	33	-
Directors' fees and expenses	13	20
	13,486	15,732
Excess (deficiency) of revenue over expenditure	90	(2,090)
(Deficit) retained earnings, beginning of year	(1,718)	372
Deficit, end of year	(1,628)	(1,718)

See accompanying notes to financial statements.

Statement of Changes in Financial Position

for the year ended
March 31, 1989

	1989	1988
	(\$'000)	(\$'000)
Cash provided by (used in) operating activities		
Excess (deficiency) of revenue over expenditure	90	(2,090)
Charge to operations not requiring a current cash payment - depreciation	91	75
	181	(2,015)
Net change in non-cash working capital balances	636	579
Cash provided by (used in) operations	817	(1,436)
Cash used in investing activities		
Additions to fixed assets	(153)	(69)
Net increase (decrease) in cash during the year	664	(1,505)
Cash, beginning of year	139	1,644
Cash, end of year	803	139

See accompanying notes to financial statements.

Auditor's Report

*To the Ontario Waste Management
Corporation and to the Minister of the
Environment*

■ I have examined the statement of financial position of the Ontario Waste Management Corporation as at March 31, 1989 and the statements of operations and deficit and changes in financial position for the year then ended. My examination was made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as I considered necessary in the circumstances. ■ In my opinion, these financial statements present fairly the financial position of the Corporation

as at March 31, 1989 and the results of its operations and the changes in its financial position for the year then ended in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.



D. F. Archer, F.C.A.,
Provincial Auditor

Toronto, Ontario,
May 31, 1989.

Notes to Financial Statements

March 31, 1989

1. Significant Accounting Policies

i. Basis of accounting

These financial statements have been prepared in accordance with generally accepted accounting principles.

ii. Fixed assets

Depreciation for furniture and equipment is computed on the declining balance basis at rates designed to amortize the cost of these assets over their estimated useful lives. Leasehold improvements are amortized on a straight-line basis over the life of the lease.

2. Funding To Intervenorors

As part of the approval process for the construction of a proposed waste disposal facility, a public hearing to address environmental and other related issues is anticipated to commence in 1989 before a Joint Board established under the Consolidated Hearings Act. ■■■ The Province has allocated approximately \$3.2 million to be provided to eligible parties (intervenorors) to finance their cost of preparation and appearance at this hearing. An

independent Funding Panel, appointed under the Intervenor Funding Project Act, 1988 is responsible for the allocation of this funding. Payments to the intervenors are made by the Corporation based on requests from the Funding Panel. ■■■ In March 1989 the Corporation received an initial transfer of \$800,000 under this provision and at March 31, 1989, \$33,000 was due to intervenors and \$767,000 represents deferred intervenor grants.

3. Fixed Assets

	1989		1988		Depreciation Rate
	Cost	Accumulated Depreciation	Net Book Value	Net Book Value	
	(\$'000)	(\$'000)	(\$'000)	(\$'000)	
Furniture	244	165	79	92	20%
Equipment	489	250	239	154	20-30%
Leasehold Improvements	161	143	18	28	5 years
	894	558	336	274	

Notes to Financial Statements

March 31, 1989

4. Pension Plan

The Corporation provides pension benefits for permanent employees through participation in the Public Service Superannuation Fund of the Province of Ontario. The Corporation's share of contributions to the fund during the year was \$105,651 (1988 - \$93,905). This contribution is included in salaries and benefits in the Statement of Operations and Deficit.

5. Lease Commitments

The Corporation is committed under operating leases on equipment and premises with future minimum payments until November, 1992 due as follows:

	(\$'000)
1990	319
1991	256
1992	254
1993	126
	955

6. Contingent Liability

In May 1987 the Corporation entered into an agreement with Ontario Hydro for work related to the supply of electricity to the Corporation's proposed waste disposal facility. The cost for such work is currently estimated at \$181,000 and will only be charged to the Corporation if construction of the facility does not proceed. Approval by the Joint Board established under the Consolidated Hearings Act and by the Provincial Cabinet to construct the facility has not taken place as at March 31, 1989.

7. Comparative Figures

Certain comparative figures have been reclassified to conform with the 1989 presentation.

The Ontario Waste Management Corporation
is a provincial Crown agency responsible for
implementing a hazardous waste manage-
ment system for Ontario.

For more information call or write:

Tracy Patterson
Communications Department
OWMC
2 Bloor Street West
11th Floor
Toronto, Ont.
M4W 3E2

(416) 923-2918
Toll-free 1-800-268-1179

In the Niagara Region:

Leslie Daniels or Mary Lou Garr
OWMC Regional Office
Village Square Mall
Highway 20 & Industrial Road
Smithville, Ont.
L0R 2A0

(416) 957-2367
Toll-free 1-800-668-9410